

REMARKS/ARGUMENTS

In the September 29, 2004 Office Action, the Examiner rejected claims 1-10 pending in the application. This Response amends claims 1 and 5 and presents new claims 11-20 for consideration. After entry of the foregoing amendments, claims 1-20 (2 independent claims; 20 total claims) remain pending in the application. Reconsideration is respectfully requested.

Claims 1-6 and 10 stand rejected under 35 U.S.C. sec. 102(e) as being anticipated by Ashjaee, U. S. Patent No. 6,482,307, issued Nov. 19, 2002 (hereinafter "Ashjaee"). In particular, the Examiner stated that Ashjaee discloses apparatus for electroplating or electropolishing semiconductor wafers which includes pad 8 and anode 9 that has an electrically conductive surface proximate to the pad. The examiner further stated that Ashjaee discloses an anode with holes 24 which accommodate pins 20 that are electrically isolated from the anode plate by an insulator 26. The Examiner also stated that Ashjaee discloses that the pins are part of the cathode plate 30 and correspond to the electrically conducting element recited in Applicant's claim 1, that the apparatus positions wafer 16 against pad 8, and that a power source is provided which supplies electrical power. The Examiner also contends that Ashjaee discloses a positive voltage applied to the anode and a negative voltage applied to the cathode and pins 20, and that although this polarity is opposite to the electroplating polarity recited in Applicant's claim 1, Ashjaee discloses that copper may be either plated onto or removed from the wafer depending upon the polarity of the wafer and that circuitry used for inverting the polarity of the potential is well known and commonly used. Therefore, the Examiner contents that all of the elements of Applicant's claim 1 are taught by Ashjaee. Applicant respectfully traverse this rejection.

Applicant's amended independent claim 1, and various depending claims 2-10, require an electrically conductive surface having more than one zone separated by insulators and a

conducting element disposed within each zone where a separate power source for each zone provides a first positive output connected to the conducting element in that zone and second negative output connected to the electrically conductive surface contained in that zone. Ashjaee fails to disclose an electrically conductive surface with more than one zone and a separate power source for each of the zones for providing positive and negative outputs to the conducting elements and electrically conductive surfaces contained in the respective zones. Accordingly, claim 1 (and 6-10 which variously depend from claim 1) is not anticipated by Ashjaee and Applicant respectfully requests the withdrawal of the rejection of claims 1 and 6-10 under 35 U.S.C. Sec. 102.

Claims 7-9 stand rejected under 35 U.S.C. Sec. 103(a) as being unpatentable over Ashjaee et al. in view of Marmillion et al., U.S. Patent No. 5,943,977, issued Aug. 10, 1999 (hereinafter "Marmillion") and Zubak, U.S. Patent No. 3,849,272, issued Nov. 19, 1974 (hereinafter "Zubek"). In particular, the Examiner stated that although Ashjaee is silent as to the spacing between anode (cathode) 9 and the metallized surface of the wafer, Marmillion discloses a method for planarizing a workpiece where the conductive surface and the metallized surface of the wafer contact the pad where the spacing between the two can be no greater than the thickness of the pad. The Examiner further states that Marmillion teaches that the pad is made of a porous resilient material that may have a thickness of 0.06 mm and that pressure applied during the process would be expected to further reduce the thickness of the pad and the distance between the platen and the surface of the workpiece. The Examiner therefore contends that the spacing used by Marmillion falls within the ranges recited in Applicant's claims 7 and 8. The Examiner further states that Zuback teaches that to improve accuracy in electrochemical removal of material from a workpiece, it is known to reduce the thickness of the working gap to the utmost. The Examiner therefore contends that it would have been obvious at the time the invention was

made to have minimized the working gap between the anode (cathode) 9 and the surface of the workpiece in Ashjaee to a small value as taught by Marnillion and Zuback to improve the accuracy of the material removal. Applicant respectfully traverse this rejection.

As previously stated above, claims 7-9 each require an electrically conductive surface having more than one zone separated by insulators and a conducting element disposed within each zone where a separate power source for each zone provides a first positive output connected to the conducting element in that zone and second negative output connected to the electrically conductive surface contained in that zone. Neither Ashjaee, Marnillion, or Zuback, either alone or in combination, disclose an electrically conductive surface with more than one zone and a separate power source for each of the zones for providing positive and negative outputs to the conducting elements and electrically conductive surfaces contained in the respective zones. Therefore, Applicant's claims 7-9 could not have been obvious in light of Ashjaee, Marmillion, and/or Zuback.

Finally, Applicant's new claims 11-20 each include an electrically conductive platen disposed proximate to a polishing pad which comprises a top cover plate, a bottom section plate, and an intermediate channel plate having channel grooves positioned between the top and bottom plates. None of the references uncovered or cited by the Examiner include this limitation. Accordingly, Applicant's claims 11-20 cannot be anticipated or obvious in light of the cited prior art.

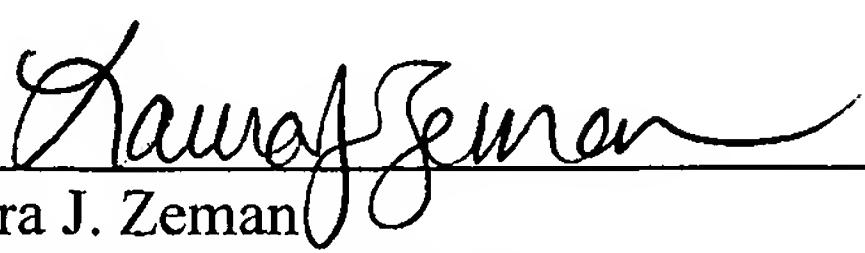
In view of the foregoing, Applicant respectfully submits that all of the pending claims fully comply with 35 U.S.C. §112 and are allowable over the prior art of record. Reconsideration of the application and allowance of all pending claims is earnestly solicited. Should the Examiner wish to discuss any of the above in greater detail or deem that further

amendments should be made to improve the form of the claims, then the Examiner is invited to telephone the undersigned at the Examiner's convenience.

Respectfully submitted,

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